

PHASE CHANGE HEAT STORAGE AND FLEXIBLE ENERGY UTILIZATION IN BUILDINGS

Speaker

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Abstract

Under the context of constructing new power systems, the high penetration of renewable energy has led to intermittency and volatility in energy supply. Phase change energy storage has emerged as a key solution to address the mismatch between energy supply and demand in buildings and to enhance the flexibility of building energy systems. Focusing on phase change thermal storage and building flexible energy use, this presentation will introduce a series of theoretical and applied advances in areas including the modification and performance enhancement of phase change material, heat transfer intensification theories for phase change storage equipment, and dynamic regulation technologies for phase change storage system.

Biography

Shilei Lv, Yingcai Professor at Tianjin University and Associate Dean of the School of Environmental Science and Engineering, is a National Leading Talent in Technological Innovation. He has been consecutively listed in the "World's Top 2% Scientists" for four years. Professor Lv serves as the Chair of the Building Commissioning Committee under the China Association of Building Energy Efficiency and as an Associate Editor for the journal *Frontiers in the Built Environment*. His long-term research focuses on building thermal energy storage and flexible energy technologies for regional integrated energy systems. He has led numerous national-level projects and major industry-sponsored initiatives, publishing 111 SCI-indexed papers and securing 20 invention patents (including two in the United States). Additionally, he has presided over the compilation of four technical standards and authored one monograph.



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**Room 3574 (Lift 27/28),
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